with first\_payments as (

select user\_id

, min(transaction\_datetime)::date as first\_payments\_date

from skyeng\_db.payments

where status\_name = 'success'

group by user\_id

),

all\_dates as (

select

distinct class\_start\_datetime::date as dt

from skyeng\_db.classes

where date\_trunc('year',class\_start\_datetime) = '2016-01-01'

order by 1

),

all\_dates\_by\_user as (

select user\_id, dt as dt

from all\_dates

join first\_payments on all\_dates.dt >= first\_payments.first\_payments\_date

order by 1,2

),

payments\_by\_dates as (

select user\_id, transaction\_datetime::date as dt

, sum(classes) as transaction\_balance\_change

from skyeng\_db.payments

group by 1,2

),

payments\_by\_dates\_cumsum as (

select all\_dates\_by\_user.user\_id

, all\_dates\_by\_user.dt

, transaction\_balance\_change

, sum (coalesce(transaction\_balance\_change,0)) over (partition by all\_dates\_by\_user.user\_id order by all\_dates\_by\_user.dt)

from all\_dates\_by\_user

join payments\_by\_dates

on all\_dates\_by\_user.user\_id=payments\_by\_dates.user\_id and all\_dates\_by\_user.dt=payments\_by\_dates.dt

order by 1,2

)

select \*

from payments\_by\_dates\_cumsum